REMARKS

Claims 1-15 are pending in the application; the status of the claims is as follows:

Claims 1, 4-6, 9-11, 14, and 15 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,189,528 to Takashima et al ("Takashima").

Claims 2, 3, 7, 8, 12, and 13 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Takashima in view of U.S. Patent No. 5,774,077 to Immink ("Immink").

To date, no Notice of Draftsperson's Patent Drawing Review has been received. Applicant respectfully requests receipt of this document when it becomes available. Please note that the original drawings filed in the patent application are "formal" drawings.

35 U.S.C. § 103(a) Rejections

The rejection of claims 1, 4-6, 9-11, 14, and 15 under 35 U.S.C. § 103(a), as being unpatentable over Takashima, is respectfully traversed based on the following.

Takashima shows an image reading apparatus that uses a plurality of line sensors 901. These sensors are placed end to end to cover the entire document. One aspect of processing the image is that the line sensors are not perfectly matched (Fig. 48(d)). Each sensor is called a channel (Col. 1, lines 28-33). The stated object of this reference is "to prevent stripes or density irregularity [sic] from appearing in a reproduced image by a unique adjustment of the density differences at the channel boundaries even when a plurality of line sensors arrayed in a line is used." (Col. 1, line 66 – Col. 2, line 3). To correct for the differences in sensors, the pixels at neighboring channels are compared and the density difference between channels is reduced (Col. 58, line 57 – Col. 58, line 17). In addition, an edge detector 3034 (Fig. 15(b)) for detecting the edge of the original document physically resides in LSI 323, but does not detect edges within an image.

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In contrast to the cited references, claim 1 includes:

a region detector for detecting an edge region in an image data;
a density conversion unit for reducing a density difference within
the edge region detected by said region detector; ...

Thus the edge region detected is a region in the image data and the density
difference is reduced in this detected edge region of the image. In contrast, Takashima
shows reducing a density difference at the edge of sensors, not at detected edges within the
image data. Thus, the cited references do not show or suggest every limitation of claim 1
and claim 1 is not obvious over the cited art. MPEP§2143.03. Claims 4 and 5 are
dependent upon claim 1 and thus include every limitation of claim 1. Therefore, claims 4
and 5 are also not obvious.

Also in contrast to the cited references, claim 6 includes:

detecting an edge region within an image data;
reducing a density difference within the edge region; ...

As noted above, Takashima only shows reducing a density difference at the edge
of sensors, not at detected edges within the image data. The cited references do not
suggest detecting an edge region in the image data and reducing a density difference in the
detected edge region. Thus, the cited references do not show or suggest every limitation
of claim 6 and claim 6 is not obvious. Claims 9 and 10 are dependent upon claim 6 and
thus include every limitation of claim 6. Therefore, claims 9 and 10 are also not obvious.

Also in contrast to the cited references, claim 11 includes:

detecting an edge region within an image data;
reducing a density difference within the edge region;...

As noted above, Takashima only shows reducing a density difference at the edge
of sensors, not at detected edges within the image data. The cited references do not

suggest detecting an edge region in the image data and reducing a density difference in the detected edge region. Thus, the cited references do not show or suggest every limitation of claim 11 and claim 11 is not obvious. Claims 14 and 15 are dependent upon claim 11 and thus include every limitation of claim 11. Therefore , claims 14 and 15 are also not obvious.

Accordingly, it is respectfully requested that the rejection of claims 1, 4-6, 9-11, 14, and 15 under 35 U.S.C. § 103(a) as being unpatentable over Takashima, be reconsidered and withdrawn.

The rejection of claims 2, 3, 7, 8, 12, and 13 under 35 U.S.C. § 103(a), as being unpatentable over Takashima in view of Immink, is respectfully traversed based on the following.

Immink shows a method for transmitting data words of a bit length n-1 using a channel designed for words having bit length n (Col. 1, lines 9-16). A leading data bit is inserted using a designated encoding scheme (Col. 1, line 30 – Col. 2, line 26). "Upon decoding, the added bit in the channel words received should be deleted in order to obtain the converted channel words." (Col. 2, lines 51-53). Thus, the original n-1 length word is restored.

In contrast to the cited references, claim 2 includes converting "N-bit image data into (N-1)-bit image data," which is opposite of adding an additional bit as in Immink. Furthermore, processing image data by removing an actual data bit is very different from adding a dummy bit for transmission and removing it on arrival, as in Immink. In addition, claim 2 is dependent upon claim 1 and includes every limitation of claim 1. The Immink reference does not show or suggest the limitations not shown in Takashima. Therefore the combined references do not show or suggest every limitation of the claim. Therefore, claim 2 is not obvious over the cited references. Claim 3 is dependent upon claim 2 and thus includes every limitation of claim 2. Therefore, claim 3 is also not obvious over the cited references.

Also in contrast to the cited references, claim 7 includes converting "N-bit image data into (N-1)-bit image data," which is opposite of adding additional bits as in Immink. In addition, claim 7 is dependent upon claim 6 and includes every limitation of claim 6. The Immink reference does not show or suggest the limitations not shown in Takashima. Therefore the combined references do not show or suggest every limitation of the claim. Therefore, claim 7 is not obvious over the cited references. Claim 8 is dependent upon claim 7 and thus includes every limitation of claim 7. Therefore, claim 8 is also not obvious over the cited references.

Also in contrast to the cited references, claim 12 includes converting "N-bit image data into (N-1)-bit image data," which is opposite of adding additional bits as in Immink. In addition, claim 12 is dependent upon claim 11 and includes every limitation of claim 11. The Immink reference does not show or suggest the limitations not shown in Takashima. Therefore, the combined references do not show or suggest every limitation of the claim. Therefore, claim 12 is not obvious over the cited references. Claim 13 is dependent upon claim 12 and thus includes every limitation of claim 12. Therefore, claim 13 is also not obvious over the cited references.

Accordingly, it is respectfully requested that the rejection of claims 2, 3, 7, 8, 12, and 13 under 35 U.S.C. § 103(a) as being unpatentable over Takashima in view of Immink, be reconsidered and withdrawn.

CONCLUSION

Wherefore, in view of the foregoing amendments and remarks, this application is considered to be in condition for allowance, and an early reconsideration and a Notice of Allowance are earnestly solicited.

This Amendment does not increase the number of independent claims, does not increase the total number of claims, and does not present any multiple dependency claims. Accordingly, no fee based on the number or type of claims is currently due. However, if a
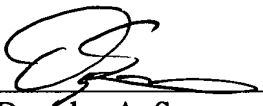
fee, other than the issue fee, is due, please charge this fee to Sidley Austin Brown & Wood LLP's Deposit Account No. 18-1260.

Any fee required by this document other than the issue fee, and not submitted herewith should be charged to Sidley Austin Brown & Wood LLP's Deposit Account No. 18-1260. Any refund should be credited to the same account.

If an extension of time is required to enable this document to be timely filed and there is no separate Petition for Extension of Time filed herewith, this document is to be construed as also constituting a Petition for Extension of Time Under 37 C.F.R. § 1.136(a) for a period of time sufficient to enable this document to be timely filed.

Any other fee required for such Petition for Extension of Time and any other fee required by this document pursuant to 37 C.F.R. §§ 1.16 and 1.17, other than the issue fee, and not submitted herewith should be charged to Sidley Austin Brown & Wood LLP's Deposit Account No. 18-1260. Any refund should be credited to the same account.

Respectfully submitted,

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